

## For more information

*To contact the ARB Mobile Source*

*Enforcement Branch directly:*

*(916) 322-7061 (from Northern CA)*

*(626) 450-6158 (from Southern CA)*

*To contact the ARB toll-free:*

*(800) END-SMOG (CA only) or*

*(800) 242-4450 (outside CA)*

*P.O. Box 2815, Sacramento, CA*

*95812*

*For information in*

*Alternative formats:*

*(916) 323-4916 (voice, ARB ADA Coordinator)*

*(916) 324-9531 (TDD, Sacramento area only)*

*(800) 700-8326 (TDD, outside of Sacramento)*

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State of California  
**Arnold Schwarzenegger, Governor**

California Environmental Protection Agency  
**Terry Tamminen**  
**Secretary for Environmental Protection**

Air Resources Board  
**Alan C. Lloyd, Ph.D., Chairman**

### ***Why California is Inspecting Heavy-Duty Vehicles***

Only two percent of California's vehicles are heavy-duty vehicles, but they produce about 30 percent of nitrogen oxides (a key smog forming compound) and about 65 percent of soot emissions from motor vehicles. Smog and airborne soot can cause or aggravate many kinds of respiratory problems.

Heavy-duty vehicle owners can do their part to improve air quality by preventing excessive emissions from their equipment. Proper vehicle maintenance reduces emissions and saves money! The roadside inspections ensure that all vehicles operating in California meet reasonable standards of maintenance and help protect the air we all breathe.

### ***How dirty is your exhaust smoke?***

Hold this chart at arm's length while someone performs a snap-acceleration test on your vehicle's engine.

Compare your exhaust smoke with the chart below to determine the opacity of your smoke. The closest match will give you an approximate idea of your smoke opacity.



**20 percent opacity**



**40 percent opacity**

Citation for 1991 and newer engines



**55 percent opacity**

Notice of violation pre-1991 engines



**70 percent opacity**

Citation for pre-1991 engines

California Environmental Protection Agency



**Air Resources Board**

facts about...

california's heavy-duty  
vehicle inspection  
program

Helping you  
do your part to  
help clean  
the air



**HD vehicle information series**

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**[www.arb.ca.gov](http://www.arb.ca.gov)**

**Tel: (916) 322-7061 (from Northern California)**  
**(626) 450-6158 (from Southern California)**

# California's Heavy-Duty Vehicle Inspection Program



***All heavy-duty trucks and buses are subject to California's anti-smoke inspections***

The California Air Resources Board (ARB) is testing heavy-duty trucks and buses for excessive smoke and tampering. Any heavy-duty vehicle traveling in California, including vehicles registered in other states and foreign countries, may be tested.

## ***Where the tests are performed***

ARB inspectors may conduct unannounced roadside tests at various locals, such as:

- CHP weigh stations
- Randomly selected roadside locations
- Fleet facilities

## ***The common causes of excessive smoke***

Poorly maintained engines emit excessive smoke. The best way to pass the test is to properly maintain your engine. Common maintenance problems are:

- Smoke puff limiters
- Max fuel rate too high
- Fuel pump calibration
- Fuel injection timing

## ***The anti-smoke inspection***

The inspection team selects a vehicle for the test, and directs it to a special inspection lane where the wheels are choked for safety. The driver is instructed to rapidly depress the accelerator several times with the transmission in neutral, until maximum governed speed is reached. These clean-out procedures will clear soot build-up in the system prior to the test and ensure that the vehicle's engine is in proper mechanical condition.

## ***RPM recording:***

The inspector records the vehicle's RPM at idle and at maximum governed speeds.

## ***The snap-acceleration test:***

The inspector positions a smoke sensing meter just above, or places a probe just inside, the vehicle's smoke stack. The driver then rapidly accelerates the engine with the transmission in neutral. The meter measures the opacity of the smoke being emitted. The driver is then instructed to repeat the snap-acceleration test three times.

## ***The visual inspection:***

Next the inspector looks under the hood to check for visible signs of tampering, and records engine data.

## ***Allowable levels of smoke opacity***

### ***All 1991 or newer engines:***

must not exceed 40 percent smoke opacity.

### ***All pre-1991 engines:***

must not exceed 55 percent smoke opacity.

## ***The penalties for excessive smoke are:***

### ***Notice of Violation:***

For pre-1991 vehicles that have smoke opacities greater than 55 percent but less than 70 percent and have not received a citation in the past 12 months a Notice of Violation is issued. Similar to a "fix-it ticket", the Notice of Violation has no penalty if repairs are made to the engine and a Demonstration of Correction form is submitted to the ARB within 45 days. If repairs are not made and a Demonstration of Correction form is not submitted within 45 days, a citation will be issued. Only one Notice of Violation may be issued to a vehicle within a 12 month period.

### ***First Level Citation:***

For pre-1991 engines with 70 percent or greater smoke opacity and 1991 and newer engines with greater than 40 percent opacity, that have not received any citations in the past 12 months a First Level Citation is issued. The penalty for a First Level Citation is \$300 if engine repairs are made and a Demonstration of Correction form is submitted to the ARB within 45 days.

The penalty is increased to \$800 if repairs are not made and a Demonstration of Correction form is not submitted with the ARB within 45 days.

### ***Second Level Citation:***

The penalty for any further violations within a 12 month period is \$1800. In addition, a Demonstration of Correction form must be submitted and the vehicle must be retested by the ARB in order to clear the citation.

In extreme cases, the CHP may take a vehicle out of service for an outstanding citation if the penalty has not been paid, or if the vehicle has not been repaired.

***The best way to avoid a citation is to properly maintain your engine!***